

## ABSTRACT

The present invention relates to a polymeric composition of matter. The composition includes at least one polymer matrix and plurality of quantum dots distributed therein. The polymer may be a perfluorocyclobutane polymer having high optical transmission at telecommunications wavelengths. The quantum dots may include cap compounds to increase the solubility of the quantum dots in the composition. Typical cap compounds include aromatic organic molecules. Optical devices including waveguides may be fabricated from the polymeric compositions of the invention.

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